	Application No.	Applicant(s)
Notice of Allowability	10/007,056	POLEY ET AL.
	Examiner	Art Unit	
	Russ Guill	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *an amendment filed August 9, 2006*.

2. ☒ The allowed claim(s) is/are *1 - 14, 28 and 30 - 33*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the

changes and/or additions be unacceptable to applicant, an amendment may be

filed as provided by 37 CFR 1.312. To ensure consideration of such an

amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone

interview with Chris Fairborn on September 18, 2006.

The claims have been amended as follows:

Claim 9, line 2, the words "one or more" have been deleted.

Allowable Subject Matter

2.   Claims 1 – 14, 28 and 30 - 33 are allowed over the prior art of record.

3.   The following is an examiner's statement of reasons for allowance:

4.   While Frantz (U.S. Patent 6,636,929) teaches a USB interface configured to

communicate with one or more USB ports of the in-test host to communicate USB

messages with the in-test host, a network interface configured to communicate

with a peripheral using a network communications protocol, operating logic

configured to perform actions comprising receiving USB command messages

sent from the host to the interface device, and sending the received command

messages from the interface device to the peripheral through the network

interface using the network communications protocol, and receiving response

messages sent from the peripheral to the interface device through the network

interface using the network communications protocol, and sending the received

response messages from the interface device through the USB interface to the

host, and McAlear (U.S. Patent 6,389,029) teaches a network communications

protocol which supports logical network ports, sending USB command messages

from an interface device to a peripheral through a network interface using a

network communication protocol, and receiving USB response messages sent

from a peripheral to an interface device through a network interface using a

network communication protocol, and sending received USB response messages

from an interface device to a host, and maintaining a correspondence between

USB peripheral devices and multiplexed network slots of an interface device,

such that upon receiving a USB command message from a host using a USB

protocol and corresponding to a particular USB peripheral device, the interface

device sends the USB command message to the peripheral via one of the

multiplexed network slots which corresponds to the particular USB device, and

such that when receiving a USB response message from the peripheral using the

network communications protocol and corresponding to the particular USB

peripheral device, the interface device receives the USB response message via the

multiplexed network slot which corresponds to the particular USB device, and

IbmTechnicalDisclosure (IBM Technical Disclosure Bulletin, "Multiple Control

Unit/Device Emulator for Testing Computer Programs", September 1971)

teaches an in-test host and a peripheral emulator, and Hsu (U.S. Patent 6,393,588)

teaches a peripheral emulator configured to emulate USB peripheral devices,

none of these references taken either alone or in combination with the prior art of

record teaches a testing interface device for testing an in-test host's support of

USB peripherals, specifically including:

     a.   Regarding claim 1, "USB interfaces configured to communicate

with one or more USB ports of the in-test host", "the peripheral emulator

configured to emulate USB peripheral devices", "to determine whether

the in-test host supports proper operation of the emulated USB devices",

"maintaining a correspondence between the emulated USB peripheral

devices and the logical network ports of the testing interface device, such

that upon receiving a USB command message from the in-test host using a

USB protocol and corresponding to a particular emulated USB peripheral

device, the testing interface device sends the USB command message to

the peripheral emulator via one of the logical network ports which

corresponds to the particular emulated USB device, and such that when

receiving a USB response message from the peripheral emulator using the

network communications protocol and corresponding to the particular

emulated USB peripheral device, the testing interface device receives the

USB response message via the logical network port which corresponds to

the particular emulated USB device";

in combination with the remaining features and elements of the claimed

invention. It is for these reasons that the Applicant's invention defines over the

prior art of record.

5.   While Frantz (U.S. Patent 6,636,929) teaches sending the command data

packets of the interface device to a peripheral over network communications

media, receiving the response data packets from the peripheral over the network

communications media at the interface device, wherein the response data packets

are formatted in accordance with a network communications protocol, and

McAlear (U.S. Patent 6,389,029) teaches sending USB command messages from a

host to an interface device which supports logical network ports, receiving the

USB command messages from the host at the interface device, packaging the

USB command messages in command data packets formatted in accordance with

a network communications protocol, sending the command data packets via

multiplexed slots of the interface device to a peripheral over network

communications media, unpackaging the USB command messages from the

command data packets, generating USB response messages, packaging the USB

response messages in response data packets, such that the response data packets

can be sent to the interface device using the network communications protocol,

receiving the response data packets from the peripheral over the network

communications media at the testing interface device via the logical network

ports, wherein the response data packets are formatted in accordance with a

network communications protocol, unpackaging USB response messages from

the response data packets at the interface device, sending the USB response

messages which have been unpackaged from the interface device to the host,

receiving the USB response messages at the host, and maintaining a

correspondence between USB peripheral devices and multiplexed network slots

of an interface device, such that upon receiving a USB command message from a

host using a USB protocol and corresponding to a particular USB peripheral

device, the interface device sends the USB command message to the peripheral

via one of the multiplexed network slots which corresponds to the particular

USB device, and such that when receiving a USB response message from the

peripheral using the network communications protocol and corresponding to the

particular USB peripheral device, the interface device receives the USB response

message via the multiplexed network slot which corresponds to the particular

USB device, and IbmTechnicalDisclosure (IBM Technical Disclosure Bulletin,

"Multiple Control Unit/Device Emulator for Testing Computer Programs",

September 1971) teaches an in-test host and a peripheral emulator, and Hsu (U.S.

Patent 6,393,588) teaches emulating one or more USB peripheral devices that

respond to the USB command messages, none of these references taken either

alone or in combination with the prior art of record teaches a method of testing

an in-test host's support of USB peripherals, specifically including:

      b.   Regarding claim 28, "sending the command data packets via the

logical network ports of the testing interface device to a peripheral

emulator", "unpackaging the USB command messages from the command

data packets at the peripheral emulator", "packaging the USB response

messages in response data packets at the peripheral emulator, such that

the response data packets can be sent from the peripheral emulator to the

testing interface device using the network communications protocol",

"determining whether the in-test host supports proper operation of the

emulated USB devices based on the USB response messages",

"maintaining a correspondence between the emulated USB peripheral

devices and the logical network ports of the testing interface device, such

that upon receiving a USB command message from the in-test host using a

USB protocol and corresponding to a particular emulated USB peripheral

device, the testing interface device sends the USB command message to

the peripheral emulator via one of the logical network ports which

corresponds to the particular emulated USB device, and such that when

receiving a USB response message from the peripheral emulator using the

network communications protocol and corresponding to the particular

emulated USB peripheral device, the testing interface device receives the

USB response message via the logical network port which corresponds to

the particular emulated USB device";

in combination with the remaining features and elements of the claimed

invention.   It is for these reasons that the Applicant's invention defines over the

prior art of record.

6.   Any comments considered necessary by applicant must be submitted no

later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled

"Comments on Statement of Reasons for Allowance."
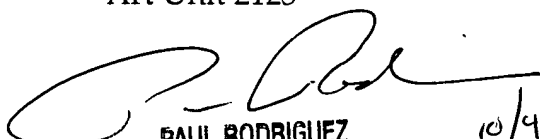
Conclusion

7.   Any inquiry concerning this communication or earlier communications

from the examiner should be directed to Russ Guill whose telephone number is

571-272-7955. The examiner can normally be reached on Monday – Friday 10:00

AM – 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300. Any inquiry of a general nature or relating to the status

of this application should be directed to the TC2100 Group Receptionist: 571-272-

2100.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

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http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free).

RG

Russ Guill
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